

WHAT IS CLAIMED IS:

505 A.1
1. An image forming apparatus carrying an optical reading apparatus thereon, wherein said optical reading apparatus comprising:

platen glass defined with one end and the other end, on an upper surface of which an original document is placed;

an optical reading unit that translates between said both ends on a lower surface of said platen glass, for obtaining image data by irradiating an original document surface with light through said platen glass;

a control circuit board connected to said optical reading unit, for processing an electric signal; and

a housing wherein a side on the side of said other end is thicker than a side on the side of said one end,

and wherein said image forming apparatus having a cabinet containing: sheet discharge means for discharging an image formation sheet from a lower-part lower-side on said thicker side of said housing of said optical reading apparatus toward a lower-part upper side on said thinner side of said housing; and a discharge tray on which the image formation sheet discharged from said sheet discharge means is received and stacked.

2. The image forming apparatus according to claim 1, wherein said control circuit board is provided in a position lower than running movement space of said optical reading unit.

3. An image forming apparatus carrying an optical reading apparatus thereon, wherein said optical reading apparatus comprising:

platen glass defined with one end and the other end, on an upper surface of which an original document is placed;

light source means translating between said both ends on a lower

surface of said platen glass, for irradiating an original document surface with light through said platen glass;

photoelectric conversion means for receiving reflection light from said original document and converting it into an electric signal;

a optical path means for guiding said reflection light to said photoelectric conversion means;

a control circuit board connected to said photoelectric conversion means, for processing an electric signal; and

a housing wherein a side on the side of said other end is thicker than a side on the side of said one end,

and wherein said image forming apparatus having a cabinet containing: sheet discharge means for discharging an image formation sheet from a lower-part lower-side on said thicker side of said housing of said optical reading apparatus toward a lower-part upper side on said thinner side of said housing; and a discharge tray on which the image formation sheet discharged from said sheet discharge means is received and stacked.

4. The image forming apparatus according to claim 3, wherein said light source means has a first carriage for running said light source means and a second carriage that runs at a speed half of that of said first carriage.

5. The image forming apparatus according to claim 3, wherein said control circuit board is provided at an equal height of or at a position lower than said photoelectric conversion means.

6. The image forming apparatus according to claim 1 or 3, wherein said optical reading apparatus further comprising shield means, surrounding said photoelectric conversion means and said control circuit board, for

preventing entrance of leakage light inside and outside said apparatus and electric noise and preventing electromagnetic wave interference including diffusion of radiation noise.

7. The image forming apparatus according to claim 1 or 3, wherein in said optical reading apparatus, drive mechanism means including a drive motor is provided on said other end side rather than said center of said platen glass on a back side opposite to an operation front side of said apparatus.

8. The image forming apparatus according to claim 7, wherein said platen glass in said housing means of said optical reading apparatus is moved to the operation front side of said apparatus.

9. The image forming apparatus according to claim 8, wherein said image forming apparatus has an automatic document feeding device on said optical reading apparatus, and wherein said automatic document feeding device is hinged, so as to open and close said platen glass surface, on a back peripheral side opposite to the operation front side of said optical reading apparatus with respect to said cabinet.

10. The image forming apparatus according to claim 9, wherein image data of said original document is read from said one end side toward said other end side of said platen glass.

11. An optical reading apparatus mounted on an image forming apparatus, comprising:

platen glass defined with one end and the other end, on an upper surface of which an original document is placed;

an optical reading unit that translates between said both ends on a lower surface of said platen glass, for obtaining image data by irradiating an original document surface with light through said platen glass;

a control circuit board connected to said optical reading unit and provided on said other end side rather than said center under a surface of said platen glass, for processing an electric signal.

12. The optical reading apparatus according to claim 11, wherein said control circuit board is provided in a position lower than running movement space of said moving optical reading unit.

13. An optical reading apparatus mounted on an image forming apparatus, comprising:

platen glass defined with one end and the other end, on an upper surface of which an original document is placed;

a first carriage means including light source means translating between said both ends on a lower surface of said platen glass, for irradiating an original document surface with light through said platen glass and first reflection means for reflecting reflection light from said original document surface in a direction of said one end of said platen glass;

second carriage means including second reflection means positioned below said first carriage, synchronously running at a speed half of that of said first carriage between said one end and a center, for reflecting said reflection light from said first reflection means in a direction of said other end of said platen glass;

photoelectric conversion means, provided on said other end side rather than said center under a surface of said platen glass, for receiving reflection light from said second reflection means and converting it into an

electric signal; and

a control circuit board connected to said photoelectric conversion means and provided on said other end side rather than said center under said platen glass, for processing the electric signal.

14. The optical reading apparatus according to claim 13, wherein said control circuit board is provided at an equal height of or at a position lower than an image sensor constructing said photoelectric conversion means.

15. The optical reading apparatus according to claim 11 or 13, wherein said optical reading apparatus further comprising shield means, surrounding said photoelectric conversion means and said control circuit board, for preventing entrance of leakage light inside and outside said apparatus and electric noise and preventing electromagnetic wave interference including diffusion of radiation noise.

16. The optical reading apparatus according claim 11 or 13, further comprising drive mechanism means including a drive motor, and said drive mechanism means is provided on said other end side rather than said center of said platen glass on a back side opposite to an operation front side of said apparatus.

17. The optical reading apparatus according to claim 16, wherein said platen glass in said housing means is moved to the operation front side of said apparatus.

18. The optical reading apparatus according to claim 17, wherein image data of said original document is read from said one end side toward said

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